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dentist. The ceremony was presided over by M. Dastre, who delivered an address on behalf of the Academy of Medicine.

PROFESSOR ROBERT PARR WHITFIELD, curator in the American Museum of Natural History since 1877, the author of important contributions to paleontology and geology, died on April 6, at the age of eighty-two years.

DR. BORDEN PARKER BOWNE, professor of philosophy and dean of the Graduate School of Arts and Sciences of Boston University, well known for his works on philosophy and theology, died on April 1, at the age of sixty-three years.

DR. HARRY WALKER JAYNE, of Philadelphia, an authority on coal-tar products, died on March 7, at the age of fifty-three years.

DR. RICHARD ABEGG, professor of chemistry at the University of Breslau, was killed, on April 4, in landing after a balloon ascension.

THE surgeon-general of the army announces that preliminary examination of applicants for appointment as first lieutenants in the army medical corps, will be held on July 18, 1910, at various army posts throughout the country. Full information concerning the examination can be procured upon application to the "Surgeon-General, U. S. Army, Washington, D. C." The essential requirements to securing an invitation are that the applicant shall be a citizen of the United States, shall be between 22 and 30 years of age, a graduate of a medical school legally authorized to confer the degree of doctor of medicine, shall be of good moral character and habits, and shall have had at least one year's hospital training or its equivalent in practise. The examination will be held concurrently throughout the country at points where boards can be convened. Due consideration will be given to localities from which applications are received, in order to lessen the traveling expenses as much as possible. The examination in subjects of general education (mathematics, geography, history, general literature and Latin) may be omitted in the case of applicants holding diplomas from reputable literary or scientific colleges, normal schools or

high schools, or graduates of medical schools which require an entrance examination satisfactory to the faculty of the Army Medical School. Applications must be in possession of the adjutant general on or before June 27. There are at present 123 vacancies in the medical corps of the army.

THE Oceanographical Museum at Monaco, established by the Prince of Monaco, was opened on March 29. The different European governments and the principal scientific societies were represented at the ceremony.

THE University of Michigan Museum has received from an alumnus, C. A. Hughes, of Chicago, a collection of natural history specimens from British East Africa and an assortment of anthropological specimens from British East Africa, Uganda, Zanzibar, Zululand and other countries on the east coast of Africa. The mammals include: eland, topi, Jackson's hartebeest, wildebeest, bushbuck, waterbuck, wart hog, Coke's hartebeest, impala, Grant's gazelle, oribi, oryx, Petersi, steinbuck and Thompson's gazelle. Mr. Hughes was a member of the W. D. Boyce African Expedition, which invaded the interior of Africa with balloons and box kites for the purpose of making aerial pictures of game in the wild state, getting a photographic record of the topography of the country and pictures of the natives in their homes, and at work, hunting, play, etc. Besides Mr. Boyce, who personally led the expedition, and Mr. Hughes, there was a large staff of photographers. The expedition was entirely successful.

MOUNT SINAI HOSPITAL, New York City, announces the establishment of a second fellowship in pathology which will be known as the Eugene Meyer, Jr., fellowship. The income of the new fellowship, like that of the George Blumenthal, Jr., fellowship, established in 1908, is \$500 per annum.

#### UNIVERSITY AND EDUCATIONAL NEWS

THE new general engineering building of Union College will be formally opened on April 28.

MR. MILTON C. WHITAKER, M.S., general superintendent of the Welsbach's Company's works, has been appointed professor of industrial chemistry, at Columbia University, to the vacancy caused by the retirement of Professor Charles F. Chandler. Dr. Marston Taylor Bogert has been appointed to succeed Dr. Chandler as head of the department of chemistry.

AT Harvard University, Dr. H. W. Morse, in physics, and Dr. L. J. Henderson, in biological chemistry, have been promoted to assistant professorships. Dr. W. R. Brinckerhoff has been appointed assistant professor of pathology and Dr. S. B. Wolbach, assistant professor of bacteriology.

WALTER T. MARVIN, A.B. (Columbia), Ph.D. (Bonn), preceptor in Princeton University since 1905, has been appointed professor of mental philosophy and logic in Rutgers College.

DR. ARTHUR WILLEY, F.R.S., director of the Natural History Museum at Colombo, Ceylon, and marine biologist to the Ceylon government, has been appointed professor of zoology at McGill University. Dr. Willey, a graduate of Cambridge, acted for some years as tutor in biology in Columbia University.

#### DISCUSSION AND CORRESPONDENCE

##### AIR CURRENTS IN MOUNTAIN VALLEYS

TO THE EDITOR OF SCIENCE: Mr. Varney's interesting account of the control of cliff shadows on air currents observed in the valleys of the Canadian Selkirks, which appeared in a recent issue of SCIENCE, prompts the following report of some facts of a similar nature noted in the Yosemite Valley.

The lay and configuration of the steep-walled Yosemite trough are such that at no hour of the day, even in mid-summer, are its two sides fully sunlit throughout: there are always cliff shadows here and there; while some dwindle, others grow. The effect of this alternation of light and shadow upon the air movements along the valley sides is most marked, indeed it fairly forces itself upon one's attention when traveling on any of the

zigzag trails that lead up out of the valley. On a sunlit slope the dust from the horses' feet floats slowly upward in a golden cloud that accompanies the ascending traveler in a truly exasperating manner. On a shaded slope, the dust cloud pours at once over the edge of the trail, so that parties descending rapidly from zigzag to zigzag constantly meet their own dust wafting down upon them from above. Obviously, the logical thing to do, in order to have a dust-free journey, is to time one's ascent for an hour when the trail is in shadow, and one's descent for an hour when the trail is sunlit. This principle, after it was once understood, was indeed deliberately put in practise by the writer on all occasions when the choice of hour mattered little otherwise—always with the desired result. Some trails, like that to the Yosemite Falls, lie as a rule partly in sun, partly in shadow, and on them the trips were arranged so as to avoid the dust on those stretches where experience had shown it to be densest.

In the Yosemite Valley, as in many other mountain valleys, there is further a pronounced general air movement lengthwise through the trough, proceeding up valley in the day time and down valley at night. The rhythmic regularity with which it reverses in the early morning and in the late afternoon, was made strikingly manifest during the summer of 1905, when severe forest fires near the lower end of the valley sent up a generous volume of smoke in the otherwise pure atmosphere. Every morning the valley was clear, having been swept out, so to speak, by the nocturnal down-valley current, and the pall could be seen floating off to the southwest, down the Sierra flank. But, as the shadows in the valley trough began to shorten and progressively larger areas became isolated, a moment would soon come when the warm up drafts gained the upper hand, and the up-valley current would be inaugurated. Then, the smoke would creep up the valley, becoming denser by degrees, until by nine or ten o'clock one could scarcely see across from rim to rim. This condition would prevail all day, until with the lengthening of the shadows